

Mortality

An Overview: 2004

Total South Dakota Resident Deaths	6,811
Crude Death Rates per 100,000 population	
South Dakota	902.3
United States (Provisional)	810.0
Age-Adjusted Death Rates per 100,000 population	
South Dakota	783.6
United States	**N/A
Age-Adjusted YPLL Before Age 75 per 100,000 population	
Whites	6,031
American Indians	23,644

In 2004, the South Dakota Department of Health implemented the new standard death certificated. Multiple races could be indicted on the certificate for the first time. Please see page 218 in the Technical Notes for a more in depth explanation.

In 1999, South Dakota along with the rest of the nation made two significant changes to the way mortality data were analyzed. These changes were the switch to using the 2000 U.S. Standard for age adjusting and using ICD-10 for disease classifications. As a result, comparison to reports prior than 1999 is not possible.

Table 33 displays the deaths, crude death rates, and age-adjusted death rates for the United States and South Dakota for the past 20 years.

Table 33
Resident Deaths, Crude Death Rates, and Age-Adjusted Death Rates,
South Dakota and United States, 1985-2004

Year	United States			South Dakota		
	Number	Crude Rate	Age-Adjusted Rate	Number	Crude Rate	Age-Adjusted Rate
2004	*2,393,000	*810.0	**N/A	6,811	902.3	783.6
2003	*2,423,000	*830.0	**N/A	7,109	941.8	819.2
2002	2,443,387	847.3	845.3	6,886	912.2	791.0
2001	2,416,425	848.5	854.5	6,915	916.1	796.3
2000	2,403,351	854.0	869.0	7,014	929.2	804.8
1999	2,391,399	857.0	875.6	6,941	997.3	799.1
1998	2,337,256	847.3	870.6	6,850	984.2	791.1
1997	2,314,245	848.8	878.1	6,855	984.9	790.2
1996	2,314,690	859.2	894.1	6,793	976.0	788.1
1995	2,312,132	868.3	909.8	6,901	991.5	798.0
1994	2,278,994	866.1	913.5	6,724	966.1	778.5
1993	2,268,000	872.8	926.1	6,774	973.3	787.1
1992	2,175,613	848.1	905.6	6,680	959.8	777.6
1991	2,169,518	857.6	922.3	6,636	953.4	768.9
1990	2,148,463	863.8	938.7	6,320	908.0	735.1
1989	2,150,466	871.3	950.5	6,534	916.3	760.5
1988	2,167,999	886.7	975.7	6,567	926.1	764.6
1987	2,123,323	876.4	970.0	6,658	940.4	778.2
1986	2,105,361	876.7	978.6	6,583	929.6	775.1
1985	2,086,440	876.9	988.1	6,604	935.7	774.5

Note: *U.S. 2004 and 2003 data are provisional.

**U.S. data not available.

Crude death rates are per 100,000 population.

Age-adjusted rates are computed with the 2000 standard.

Source: National Center of Health Statistics

South Dakota Department of Health, Office of Data, Statistics, and Vital Records

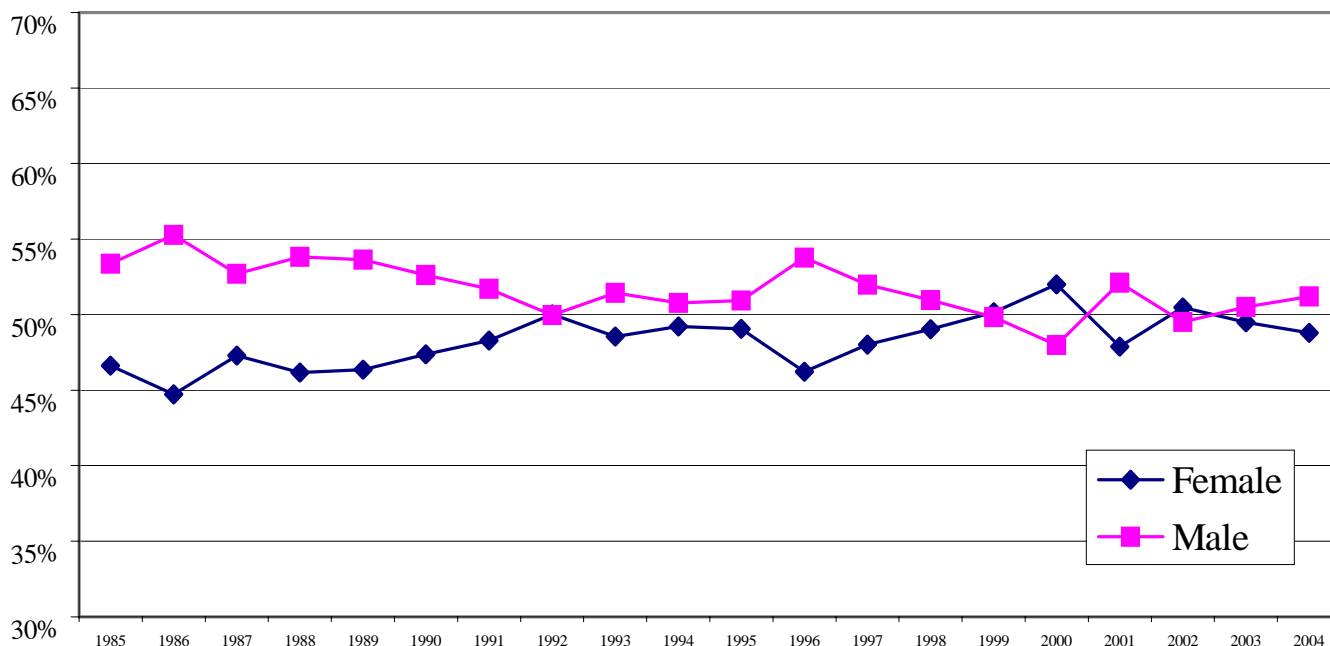
Leading Causes of Death

The five leading causes of death in 2004 for South Dakota residents were heart disease, cancer, cerebrovascular diseases, accidents, and chronic lower respiratory diseases.

Heart disease accounted for 26.1 percent of South Dakota's 2004 resident deaths a decrease of 4.4 percent from 2003. Heart disease was the leading cause of death for South Dakota residents for men and women alike as well as whites. Figure 9, below, illustrates by gender the percent of South Dakota resident heart disease deaths for the last 20 years. Over the past 20 years, the percent of deaths due to

heart disease for males usually fell between 50 to 55 percent while for the females the percent of deaths due to heart disease usually fell between 45 to 50 percent. The majority of years showed males having a higher percent of deaths due to heart disease than females. However, this was not the case in 1999, 2000, and 2002 when females had a higher percent of death due to heart disease than males. In 2004, males showed an increase from 2003 in the percent of deaths due to heart disease while females showed a decrease from 2003 in the percent of deaths due to heart disease.

Figure 9
Percent of South Dakota Resident Heart Disease Deaths
by Gender, 1985 - 2004



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Cancer was the second leading cause of death and accounted for 22.9 percent of 2004 South Dakota resident deaths, a decrease of 0.9 percent from 2003. Trachea, bronchus, and lung cancer was the highest cancer death during the year accounting for 27.1 percent of cancer deaths.

Cerebrovascular diseases accounted for 6.8 percent of 2004 South Dakota resident deaths, an increase of 1.5 percent from 2003. Stroke, not specified as hemorrhage or infarction, caused the majority of the deaths for this type of disease.

Accidents caused 6.0 percent of all South Dakota resident deaths in 2004, an increase of 9.1 percent from 2003. Accidents were also the leading cause of death for American Indians in 2004. The two most common types of accidental deaths during the year were motor vehicle accidents, causing 45.5 percent and falls, accounting for 28 percent of accidents.

Chronic lower respiratory disease accounted for 5.8 percent of 2004 South Dakota resident deaths, an increase of 9.4 percent from 2003. Chronic lower respiratory diseases include emphysema and chronic bronchitis.

Race

Table 34, below, presents South Dakota resident leading causes of death by race. In 2004, patterns for the 10 leading causes of death varied by race. Seven of the 10 leading causes were the same for whites and American Indians, but they differed by rank. For example, accidental death was the fifth leading cause of death at 4.9 percent for the white population, but the leading cause of death for the American Indian population at 17.4 percent. Cerebrovascular disease, Alzheimer's disease, and organic, including symptomatic, mental disorders

Table 34
South Dakota Resident Leading Causes of Death
by Race, 2004

Cause of Death	All Races			White			American Indian		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		6,811	100.0		6,192	100.0		575	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,775	26.1	1	1,665	26.9	2	99	17.2
Malignant Neoplasms (cancer)....(C00-C97)	2	1,559	22.9	2	1,471	23.8	3	79	13.7
Cerebrovascular Diseases.....(I60-I69)	3	463	6.8	3	446	7.2	*	*	*
Accidents.....(V01-X59, Y85-Y86)	4	407	6.0	5	303	4.9	1	100	17.4
Chronic Lower Respiratory Diseases(40-J47)	5	393	5.8	4	374	6.0	7	18	3.1
Alzheimer's Disease.....(G30)	6	255	3.7	6	248	4.0	*	*	*
Diabetes Mellitus.....(E10-E14)	7	227	3.3	7	181	2.9	4	42	7.3
Influenza and Pneumonia.....(J10-J18)	8	180	2.6	8	162	2.6	8	17	3.0
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	9	114	1.7	10	89	1.4	6	25	4.3
Chronic Liver Disease and Cirrhosis(K70, K73-K74)	10	97	1.4	*	*	*	5	36	6.3
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	*	*	*	9	90	1.5	*	*	*
Assault (homicide).....(X85-Y09, Y87.1)	*	*	*	*	*	*	8	17	3.0
Nephritis, Nephrotic Syndrome, and Nephrosis...(N00-N07, N17-N19, N25-N27)	*	*	*	*	*	*	10	16	2.8
All Other Causes	-	1,341	19.7	-	1,163	18.8	-	126	21.9

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

* This cause was not one of the ten leading causes of death for this race group.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

are in the 10 leading causes of death for the white population, but not the American Indian population. Among the 10 leading causes of death for the American Indian population, but not for the white population were nephritis, nephrotic syndrome, and nephrosis, chronic liver disease and cirrhosis, and assault (homicide).

Gender

In 2004, patterns for the 10 leading causes of death also varied by gender in South Dakota (Table 35, below). Eight of the 10 leading causes were the same for South Dakota's men and women, but they differed in rank. Intentional self-harm (suicide) and chronic liver disease and cirrhosis were among the 10 leading causes of death for South Dakota's men, but not for women.

Likewise, organic, including symptomatic, mental disorders, and nephritis, nephrotic syndrome, and nephrosis disorders were among the 10 leading causes of death for South Dakota's women, but not for South Dakota's men. Men were also more likely to die in accidents than women were, while women were more likely to die from cerebrovascular disease than men.

When ranked together, organic, including symptomatic, mental disorders and nephritis, nephritic syndrome, and nephrosis were not in the top 10 but when broken out by gender they were the ninth and tenth leading cause of death for women, respectively.

Table 35
South Dakota Resident Leading Causes of Death
by Gender, 2004

Cause of Death	All Races			Male			Female		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		6,811	100.0		3,411	100.0		3,400	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,775	26.1	1	908	26.6	1	867	25.5
Malignant Neoplasms (cancer)....(C00-C97)	2	1,559	22.9	2	845	24.8	2	714	21.0
Cerebrovascular Diseases.....(I60-I69)	3	463	6.8	5	185	5.4	3	278	8.2
Accidents.....(V01-X59, Y85-Y86)	4	407	6.0	3	245	7.2	6	162	4.8
Chronic Lower Respiratory Diseases(J40-J47)	5	393	5.8	4	219	6.4	5	174	5.1
Alzheimer's Disease.....(G30)	6	255	3.7	9	65	1.9	4	190	5.6
Diabetes Mellitus.....(E10-E14)	7	227	3.3	6	102	3.0	7	125	3.7
Influenza and Pneumonia.....(J10-J18)	8	180	2.6	8	69	2.0	8	111	3.7
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	9	114	1.7	7	96	2.8	*	*	*
Chronic Liver Disease and Cirrhosis(K70, K73-K74)	10	97	1.4	10	58	1.7	*	*	*
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	*	*	*	*	*	*	9	59	1.7
Nephritis, Nephrotic Syndrome, and Nephrosis...(N00-N07, N17-N19, N25-N27)	*	*	*	*	*	*	10	52	1.5
All Other Causes	-	1,341	19.7	-	619	18.1	-	668	19.6

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

* This cause was not one of the ten leading causes of death for this gender.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Age

Table 36, below, lists the five leading causes of death by age group. Excluding infants, accidents were the leading cause of death to age 44. The leading cause of death

for the 45 to 54, and 55 to 64 age group was cancer. Heart disease was the leading cause of death for the 65 and over age group.

Table 36
South Dakota Resident Five Leading Causes of Death
by Age Group, 2004

Rank	All Ages	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 & Over
1	Heart Disease 1,775	Congenital Malformations 32	Accidents 12	Accidents 22	Accidents 56	Accidents 34	Accidents 50	Malignant Neoplasms (cancer) 106	Malignant Neoplasms (cancer) 226	Heart Disease 1,531
2	Malignant Neoplasms (cancer) 1,559	Sudden Infant Death Syndrome 8	*	Malignant Neoplasms (cancer) 4	Intentional Self-Harm (suicide) 26	Intentional Self-Harm (suicide) 27	Heart Disease 29	Heart Disease 83	Heart Disease 123	Malignant Neoplasms (cancer) 1,186
3	Cerebrovascular Diseases 463	Short Gestation and Low Birth Weight 6	*	*	Assault (homicide) 8	Malignant Neoplasms (cancer) 7	Malignant Neoplasms (cancer) 27	Accidents 50	Accidents 36	Cerebrovascular Diseases 434
4	Accidents 407	Accidents 5	*	*	Malignant Neoplasms (cancer) 3	Heart Disease 7	Intentional Self-Harm (suicide) 22	Chronic Liver Disease and Cirrhosis 29	Chronic Lower Respiratory Diseases 24	Chronic Lower Respiratory Diseases 358
5	Chronic Lower Respiratory Diseases 393	**	*	*	*	Assault (homicide) 7	Chronic Liver Disease and Cirrhosis 12	Diabetes Mellitus 18	Chronic Liver Disease and Cirrhosis 21	Alzheimer's Disease 255

Note: *Cells with less than 3 events.

**Several causes tied for fifth place.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Median Age

Table 37, page 46, shows the median age at death for South Dakota residents from the leading causes of death by race and gender. In 2004, the median age at death was 80 for all South Dakotans; for white residents the median age was 81, compared to 57 for American Indians. The overall median age at death

increased by one year for whites and remained the same for American Indians when compared to their overall median age at death in 2003. The median age at death in 2004 for South Dakota resident males and females was 76 and 83, respectively. This has not changed in the last five years.

Table 37
Median Age at Death for South Dakota Residents for the Leading Causes of Death
by Race and Gender, 2004

Cause of Death	Median Age at Death in Years				
	All	Race		Gender	
	Total Deaths	White	American Indian	Male	Female
South Dakota (All Deaths)	80	81	57	76	83
Heart Disease (I00-I09, I11, I13, I20-I51)	84	84	68	79	87
Malignant Neoplasms (cancer) (C00-C97)	75	76	65	75	76
Cerebrovascular Diseases (I60-I69)	85	85	*	82	87
Accidents (V01-X59, Y85-Y86)	49	58	30	48	55
Chronic Lower Respiratory Diseases (J40-J47)	80	80	71	80	80
Alzheimer's Disease (G30)	88	88	*	85	89
Diabetes Mellitus (E10-E14)	79	81	69	75	81
Influenza and Pneumonia (J10-J18)	87	88	71	84	89
Intentional Self-Harm (suicide) (X60-X84, Y87.0)	35	41	23	36	*
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	55	*	50	56	*
Nephritis, Nephrotic Syndrome, and Nephrosis (N00-N07, N17-N19, N25-N27)	*	*	71	*	82
Assault (homicide) (X85-Y09, Y87.1)	*	*	26	*	*
Organic, Including Symptomatic, Mental Disorders (F00-F09)	*	90	*	*	92
All Other Causes	80	81	57	77	81

Note: Letter / number combinations following cause of death are ICD-10 codes.

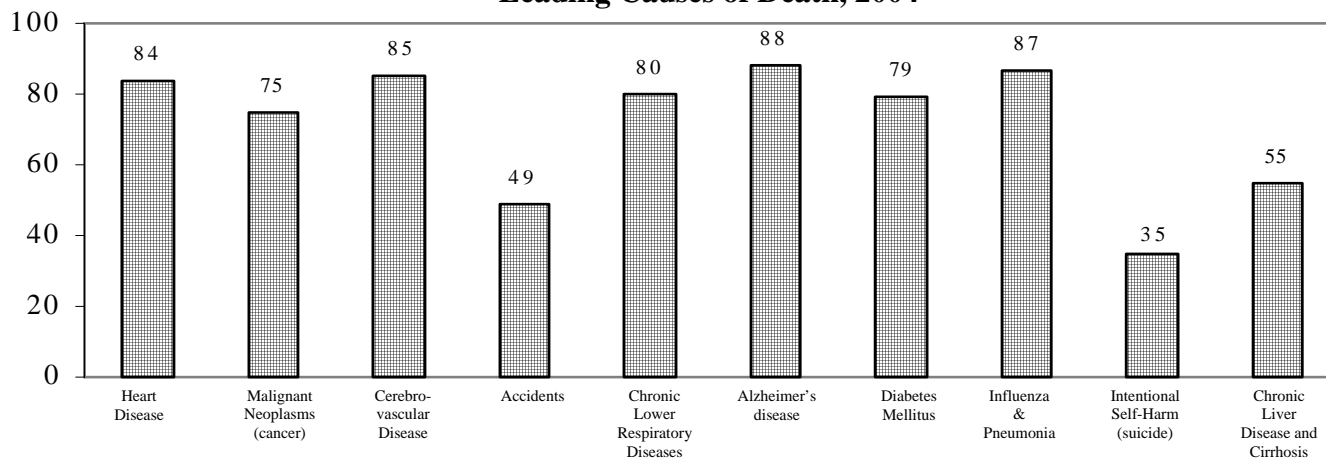
*This cause was not one of the ten leading causes of death for this race or gender.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Figure 10, below, presents data on the median age at death for the 10 leading

causes of death for South Dakota residents in 2004.

Figure 10
Median Age at Death for South Dakota Residents for the
Leading Causes of Death, 2004



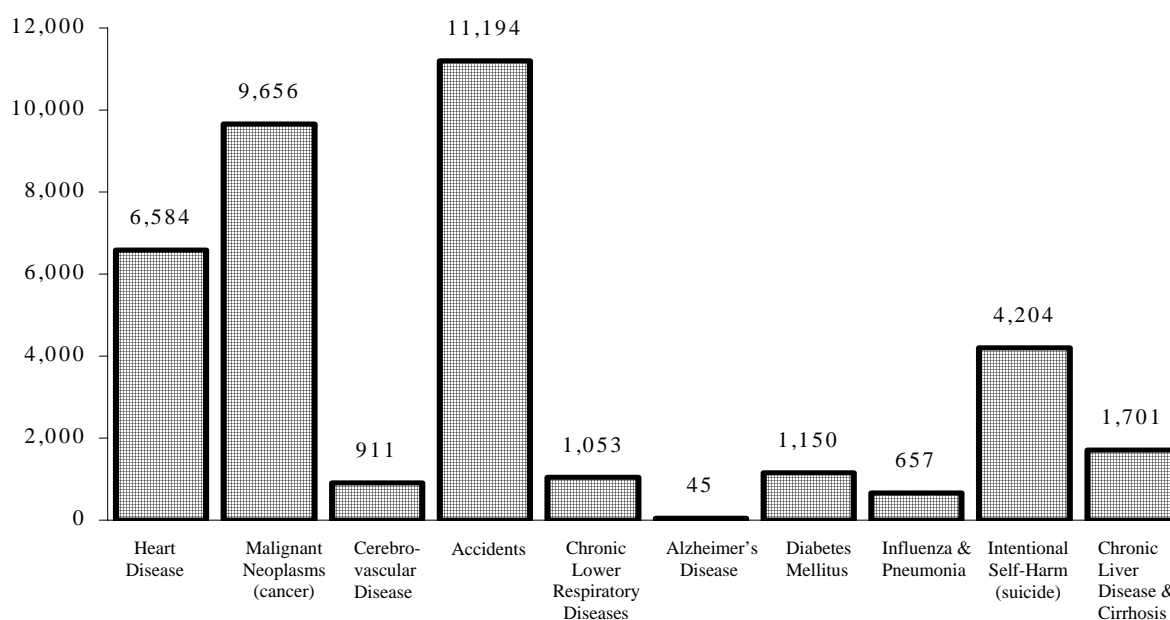
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Years of Potential Life Lost

Figure 11, below, depicts the years of potential life lost (YPLL) before age 75 for each of these causes. Please refer to page 222 of the technical notes section for an explanation of how YPLL before

age 75 is calculated. Accidents lead in YPLL (11,194 years) because many of the decedents were at a relatively young age at the time of death.

Figure 11
South Dakota Resident Years of Potential Life Lost (YPLL) Before Age 75 for the Leading Causes of Death, 2004



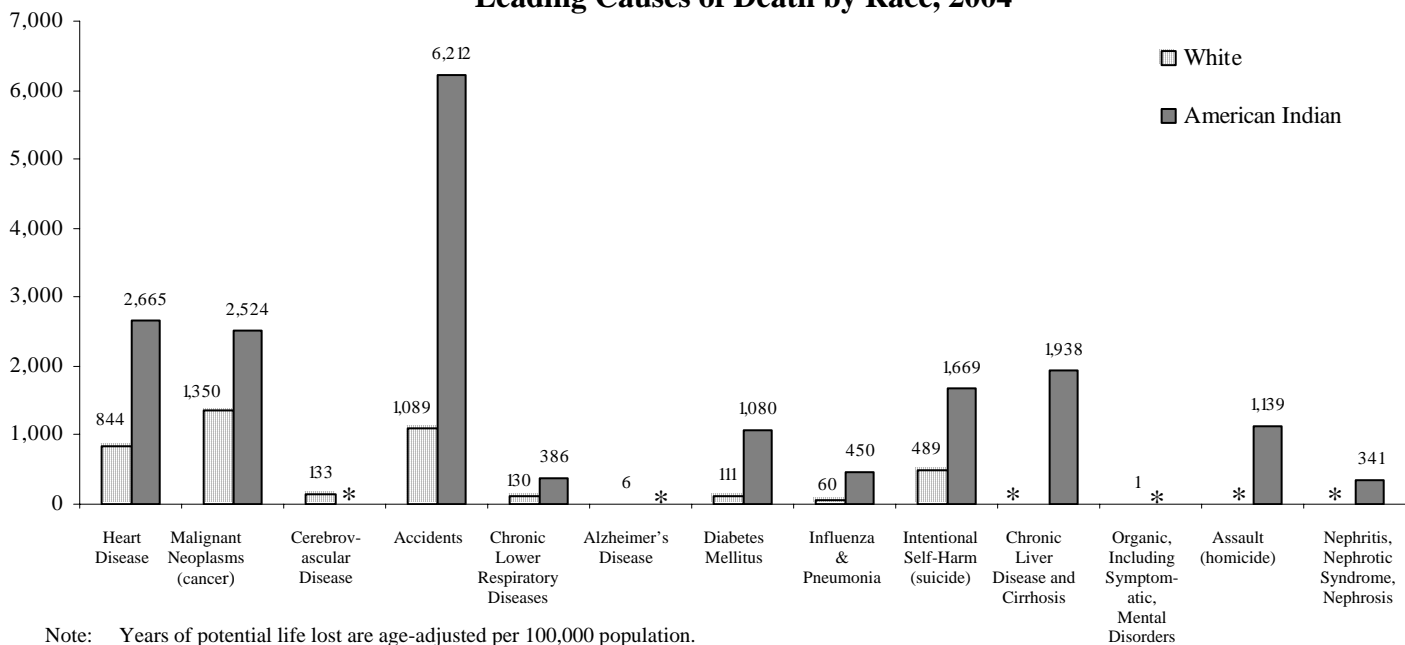
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Figure 12, on the next page, illustrates the years of potential life lost (YPLL) before the age 75 per 100,000 population for the top 10 causes of death by race. When comparing YPLL by race, American Indians exceed whites substantially in YPLL for the leading causes of death.

American Indians' largest YPLL was accidents with 6,212 years while whites' largest YPLL was cancer with

1,350 years. Whites' second largest YPLL was accidents with 1,089 years while American Indians' second largest YPLL was heart disease with 2,665 years. Whites' third largest YPLL was heart disease with 844 years. Cancer was the third largest YPLL for American Indians with 2,524 years, which still exceeded whites' largest YPLL (cancer).

Figure 12
Age-Adjusted Years of Potential Life Lost (YPLL) Before Age 75 for the
Leading Causes of Death by Race, 2004



Note: Years of potential life lost are age-adjusted per 100,000 population.

*This cause was not one of the ten leading causes of death for this race group.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Tobacco Use

For the first time in 2004, the question “did tobacco use contribute to death” was asked of the certifier completing the death certificate. Tobacco use may contribute to deaths due to a wide variety of diseases. For example, tobacco use contributes to many deaths due to emphysema or lung cancer and heart disease and cancers of the head and neck. For a complete list of diseases known to be caused by tobacco use, please refer to The Health Consequences of Smoking a Report of the Surgeon General 2004. The report is online at www.surgeongeneral.gov/library/smokingconsequences/. The certifier was instructed to check “yes” or “probably” if in their opinion, the use of tobacco contributed to death or check “no” if in their clinical judgment tobacco use did not contribute to the death. There was also the option of “unknown” if the certifier was unsure if tobacco use

contributed to death. On 1,178 deaths or 17.3 percent, the certifier indicated “yes” or “probably” that tobacco use contributed to the death. Conversely, on 4,204 deaths, or 61.7 percent, the certifier indicated that tobacco use did not contribute to the death. In the remaining 1,429 deaths, or 21 percent, the certifier was unsure if tobacco use contributed to the death.

Table 38, on the next page, displays the ten leading causes of death where the certifier said “yes” or “probably” that tobacco use contributed to the death. Tobacco use contributed to death in 81 percent, or 34 out of the 42 emphysema deaths in 2004. In 73 percent, or 309 trachea, bronchus, and lung cancer deaths the certifier said “yes” or “probably” that tobacco use contributed to the death. Of the 393 chronic lower respiratory disease deaths in 2004, certifiers said tobacco use contributed to 277 deaths, or 70.5 percent.

Table 38
South Dakota Resident Ten Leading Causes of Death as They Relate to Tobacco Use, 2004
(Did Tobacco Use Contribute to Death)

Cause of Death	Yes/Probably		Total Deaths	
	Number	Percent	Number	Percent
Total	1,178	17.3	6,811	100.0
Malignant Neoplasms (cancer).....(C00-C97)	402	25.8	1,559	100.0
Trachea, Bronchus, and Lung.....(C33-C34)	309	73.0	423	100.0
Esophagus.....(C15)	11	27.5	40	100.0
Colon, Rectum, and Anus.....(C18-C21)	8	5.3	151	100.0
Chronic Lower Respiratory Diseases.....(J40-J47)	277	70.5	393	100.0
Emphysema.....(J43)	34	81.0	42	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	257	14.5	1,775	100.0
Atherosclerotic Heart Disease.....(I25.1)	93	17.1	545	100.0
Acute Myocardial Infarction.....(I21-I22)	88	13.9	631	100.0
Atherosclerotic Cardiovascular Disease.....(I25.0)	13	14.1	92	100.0
Cardiomyopathy.....(I42)	11	26.8	41	100.0
Cerebrovascular Diseases.....(I60-I69)	45	9.7	463	100.0
Diabetes Mellitus.....(E10-E14)	30	13.2	227	100.0
Chronic Liver Disease and Cirrhosis....(K70 & K73-K74)	13	13.4	97	100.0
Alcoholic Liver Disease.....(K70)	13	20.3	64	100.0
Aortic Aneurysm and Dissection.....(I71)	13	22.8	57	100.0
Influenza and Pneumonia.....(J10-J18)	12	6.7	180	100.0
Pneumonia.....(J12-J18)	11	6.5	170	100.0
Mental and Behavioral Disorders Due to Psychoactive Substance Use.....(F10-F19)	12	32.4	37	100.0
Alzheimer's Disease.....(G30)	9	3.5	255	100.0
Metabolic Disorders.....(E70-E90)	9	20.0	45	100.0
All Other Causes	99	5.7	1,723	100.0

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Method of Disposition

Table 39, on the next page, displays the different methods of disposition for the last 10 years. The top disposition in 2004 was burial with 5,305 deaths. The second highest method of disposition in 2004 was cremation with 1,348 deaths.

Since 1995, burial has been the highest method of disposition chosen

and cremation has been the second highest method of disposition chosen.

Cremation has also been on a steady increase since 1995. In 1995, cremation accounted for 8.5 percent of dispositions and in 2004 for 19.8 percent. This led to a 132.9 percent increase from 1995 to 2004 in cremation.

Table 39
South Dakota Resident Deaths by Disposition, 1995-2004

Year	Type of Disposition						
	Total Deaths	Burial	Cremation	Removal from State	Donation	Entombment	Other
2004	6,811	5,305	1,348	120	22	12	*
2003	7,109	5,675	1,321	76	26	**	8
2002	6,886	5,627	1,148	72	24	**	11
2001	6,915	5,700	1,102	79	20	**	10
2000	7,014	5,859	1,038	86	20	**	8
1999	6,941	5,825	938	141	21	**	11
1998	6,850	5,808	829	175	25	**	5
1997	6,855	5,882	761	182	19	**	6
1996	6,793	5,843	720	209	16	**	*
1995	6,901	6,019	587	263	20	**	*

Note: Failure of deaths to add to total is due to not stated disposition.

*Cells with less than 3 events.

**Prior to 2004 entombment was included in the other category.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Education

The education of the deceased was collected on the death certificate for the first time in 2004. Table 40, below, displays the level of education by age group for residents ages 25 and above. This table has been included because of the large differences in age distributions among the education groups could have an effect on the leading causes

of death shown in Table 41. For example, 53.9 percent of residents with an 8th grade or less education were 85 years or older, while none of the other four education groups had more than 33.5 percent that were 85 years or older. Table 41, on the next page, displays level of education by leading causes of death for residents ages 25 and above.

Table 40
South Dakota Resident Deaths by Age and Education for Ages 25 and Above, 2004

Age	Total		8 th Grade or Less		Some High School		High School Graduate or GED		Some College, but No Degree		College Degree/Votech	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	6,558	100.0	1,661	100.0	660	100.0	2,368	100.0	747	100.0	1,088	100.0
25-34	106	1.6	8	0.5	18	2.7	46	1.9	16	2.1	18	1.7
35-44	187	2.9	19	1.1	18	2.7	83	3.5	33	4.4	34	3.1
45-54	396	6.0	21	1.3	40	6.1	170	7.2	61	8.2	102	9.4
55-64	566	8.6	51	3.1	58	8.8	242	10.2	85	11.4	125	11.5
65-74	1,019	15.5	196	11.8	115	17.4	437	18.5	98	13.1	166	15.3
75-84	1,887	28.8	471	28.4	190	28.8	720	30.4	205	27.4	292	26.8
85+	2,397	36.6	895	53.9	221	33.5	670	28.3	249	33.3	351	32.3

Note: Failure of deaths to add to total is due to not stated education.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 41
South Dakota Resident Leading Causes of Death for Ages 25 and Above by Education, 2004

Cause of Death	Total		8 th Grade or Less		Some High School		High School Graduate or GED		Some College, but No Degree		College Degree/Votech	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	6,558	100.0	1,661	100.0	660	100.0	2,368	100.0	747	100.0	1,088	100.0
Heart Disease (I00-I09, I11, I13, I20-I51)	1,773	27.0	536	32.3	175	26.5	599	25.3	181	24.2	275	25.3
Malignant Neoplasms (cancer)(C00-C97)	1,552	23.7	303	18.2	157	23.8	603	25.5	181	24.2	302	27.8
Cerebrovascular Diseases(I60-I69)	463	7.1	157	9.5	37	5.6	139	5.9	52	7.0	75	6.9
Chronic Lower Respiratory Diseases.....(J40-J47)	392	6.0	88	5.3	45	6.8	174	7.3	42	5.6	42	3.9
Accidents.....(V01-X59, Y85-Y86)	312	4.8	43	2.6	46	7.0	114	4.8	39	5.2	69	6.3
Alzheimer's Disease.....(G30)	255	3.9	79	4.8	21	3.2	75	3.2	29	3.9	51	4.7
Diabetes Mellitus.....(E10-E14)	227	3.5	68	4.1	22	3.3	81	3.4	24	3.2	29	2.7
Influenza & Pneumonia.....(J10-J18)	176	2.7	57	3.4	18	2.7	58	2.4	20	2.7	22	2.0
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	97	1.5	8	0.5	15	2.3	45	1.9	16	2.1	11	1.0
Nephritis, Nephrotic Syndrome, & Nephrosis(N00-N07, N17-N19, N25-N27)	93	1.4	13	0.8	10	1.5	42	1.8	8	1.1	19	1.7
All Other Causes	1,218	18.6	309	18.6	114	17.3	438	18.5	155	20.7	193	17.7

Note: Failure of deaths to add to total is due to not stated education.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Leading Causes and Selected Components

Table 42, below and page 53, and Table 43, pages 54 and 55, display South Dakota resident deaths for 15 leading causes and selected components from 2000 to 2004.

Table 42 illustrates the number of deaths by causes and components, while Table 43 illustrates the same causes and components by crude death rates.

Table 42
South Dakota Resident Deaths for 15 Leading Causes
and Selected Components, 2000-2004

Cause of Death	Total	2004	2003	2002	2001	2000
All Causes	34,735	6,811	7,109	6,886	6,915	7,014
Heart Disease	9,739	1,775	1,942	1,933	1,984	2,105
Acute Myocardial Infarction	3,385	631	697	633	685	739
All Other Forms of Chronic Ischemic Heart Disease	3,049	614	594	593	601	647
Heart Failure	1,001	145	185	207	218	246
Atherosclerotic Cardiovascular Disease	605	92	119	120	142	132
Hypertensive Heart Disease	124	35	23	20	22	24
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	56	16	13	11	7	9
All Other Forms of Heart Disease	1,519	242	311	349	309	308
Malignant Neoplasms (cancer)	7,967	1,559	1,645	1,561	1,598	1,604
Trachea, Bronchus, and Lung	2,042	423	406	403	414	396
Colon, Rectum, and Anus	881	151	176	168	179	207
Female Breast	551	105	120	109	88	129
Prostate	533	102	106	109	115	101
Pancreas	463	102	95	85	99	82
Non-Hodgkin's Lymphoma	366	67	68	54	83	94
Leukemia	356	71	80	67	72	66
Meninges, Brain, and Other Parts of Central Nervous System	233	50	53	44	39	47
Ovary	222	34	46	53	47	42
Multiple Myeloma and Immunoproliferative	207	45	43	42	32	45
Kidney and Renal Pelvis	199	45	39	35	44	36
Esophagus	176	40	41	31	35	29
Bladder	175	35	40	39	36	25
Liver and Intrahepatic Bile Ducts	154	35	29	30	36	24
Stomach	128	17	22	33	27	29

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 42 (Cont.)
South Dakota Resident Deaths for 15 Leading Causes
and Selected Components, 2000-2004

Cause of Death	Total	2004	2003	2002	2001	2000
Corpus Uteri and Uterus, Part Unspecified	108	19	22	18	34	15
Melanoma of Skin	106	16	33	16	25	16
Lip, Oral Cavity, and Pharynx	100	12	20	25	20	23
Cervix Uteri	44	7	9	10	8	10
Larynx	41	5	12	10	6	8
Ill-Defined, Secondary, and Unspecified Sites	408	87	76	87	77	81
All Other Cancers	474	91	109	93	82	99
Cerebrovascular Diseases	2,508	463	475	518	491	561
Chronic Lower Respiratory Diseases	1,901	393	379	382	360	387
Accidents	1,841	407	390	344	382	318
Motor Vehicle Accidents	949	185	215	185	187	177
All Other Accidents	892	222	175	159	195	141
Influenza and Pneumonia	1,036	180	223	239	186	208
Diabetes Mellitus	1,010	227	201	193	210	179
Alzheimer's Disease	938	255	175	169	159	180
Organic, Including Symptomatic, Mental Disorders	654	91	159	144	135	125
Nephritis, Nephrotic Syndrome, and Nephrosis	584	93	131	128	102	130
Intentional Self-Harm (suicide)	514	114	103	94	108	95
Chronic Liver Disease and Cirrhosis	418	97	81	77	81	82
Septicemia	298	*	69	68	69	50
Parkinson's Disease	292	65	56	60	55	56
Aortic Aneurysm and Dissection	287	57	54	62	56	58
Essential (primary) hypertension and hypertensive renal disease	*	55	*	*	*	*

Note: *This cause was not one of the fifteen leading causes of death for that year.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 43
South Dakota Resident Crude Death Rates for 15 Leading Causes
and Selected Components, 2000-2004

Cause of Death	Total	2004	2003	2002	2001	2000
All Causes	920.3	902.3	941.8	912.2	916.1	929.2
Heart Disease	258.0	235.1	257.3	256.1	262.8	278.9
Acute Myocardial Infarction	89.7	83.6	92.3	83.9	90.7	97.9
All Other Forms of Chronic Ischemic Heart Disease	80.8	81.3	78.7	78.6	79.6	85.7
Heart Failure	26.5	19.2	24.5	27.4	28.9	32.6
Atherosclerotic Cardiovascular Disease	16.0	12.2	15.8	15.9	18.8	17.5
Hypertensive Heart Disease	3.3	4.6	3.0	2.6	2.9	3.2
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	1.5	2.1	1.7	1.5	0.9	1.2
All Other Forms of Heart Disease	40.2	32.1	41.2	46.2	40.9	40.8
Malignant Neoplasms (cancer)	211.1	206.5	217.9	206.8	211.7	212.5
Trachea, Bronchus, and Lung	54.1	56.0	53.8	53.4	54.8	52.5
Colon, Rectum, and Anus	23.3	20.0	23.3	22.3	23.7	27.4
Female Breast	29.0	27.6	31.6	28.7	23.1	33.9
Prostate	28.5	27.2	28.3	29.1	30.7	27.0
Pancreas	12.3	13.5	12.6	11.3	13.1	10.9
Non-Hogkin's Lymphoma	9.7	8.9	9.0	7.2	11.0	12.5
Leukemia	9.4	9.4	10.6	8.9	9.5	8.7
Meninges, Brain, and Other Parts of Central Nervous System	6.2	6.6	7.0	5.8	5.2	6.2
Ovary	11.7	8.9	12.1	13.9	12.4	11.0
Multiple Myeloma and Immunoproliferative	5.5	6.0	5.7	5.6	4.2	6.0
Kidney and Renal Pelvis	5.3	6.0	5.2	4.6	5.8	4.8
Esophagus	4.7	5.3	5.4	4.1	4.6	3.8
Bladder	4.6	4.6	5.3	5.2	4.8	3.3
Liver and Intrahepatic Bile Ducts	4.1	4.6	3.8	4.0	4.8	3.2
Stomach	3.4	2.3	2.9	4.4	3.6	3.8
Corpus Uteri and Uterus, Part Unspecified	5.7	5.0	5.8	4.7	8.9	3.9
Melanoma of Skin	2.8	2.1	4.4	2.1	3.3	2.1
Lip, Oral Cavity, and Pharynx	2.6	1.6	2.6	3.3	2.6	3.0

Note: Crude death rates are per 100,000 population and based on the 2000 census.
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 43 (Cont.)
South Dakota Resident Crude Death Rates for 15 Leading Causes
and Selected Components, 2000-2004

Cause of Death	Total	2004	2003	2002	2001	2000
Cervix Uteri	2.3	1.8	2.4	2.6	2.1	2.6
Larynx	1.1	0.7	1.6	1.3	0.8	1.1
Ill-Defined, Secondary, and Unspecified Sites	10.8	11.5	10.1	11.5	10.2	10.7
All Other Cancers	12.6	12.1	14.4	12.3	10.9	13.1
Cerebrovascular Diseases	66.5	61.3	62.9	68.6	65.0	74.3
Chronic Lower Respiratory Disease	50.4	52.1	50.2	50.6	47.7	51.3
Accidents	48.8	53.9	51.7	45.6	50.6	42.1
Motor Vehicle Accidents	25.1	24.5	28.5	24.5	24.8	23.4
All Other Accidents	23.6	29.4	23.2	21.1	25.8	18.7
Influenza and Pneumonia	27.4	23.8	29.5	31.7	24.6	27.6
Diabetes Mellitus	26.8	30.1	26.6	25.6	27.8	23.7
Alzheimer's Disease	24.9	33.8	23.2	22.4	21.1	23.8
Organic, Including Symptomatic, Mental Disorders	17.3	12.1	21.1	19.1	17.9	16.6
Nephritis, Nephrotic Syndrome, and Nephrosis	15.5	12.3	17.4	17.0	13.5	17.2
Intentional Self-Harm (suicide)	13.6	15.1	13.6	12.5	14.3	12.6
Chronic Liver Disease and Cirrhosis	11.1	12.9	10.7	10.2	10.7	10.9
Septicemia	7.9	*	9.1	9.0	9.1	6.6
Parkinson's Disease	7.7	8.6	7.4	7.9	7.3	7.4
Aortic Aneurysm and Dissection	7.6	7.6	7.2	8.2	7.4	7.7
Essential (primary) hypertension and hypertensive renal disease	*	7.3	*	*	*	*

Note: Crude death rates are per 100,000 population and based on the 2000 census.

*This cause was not one of the fifteen leading causes of death for that year.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 44, below and page 57, displays age adjusted rates in South Dakota for the 15 leading causes and selected components.

The age adjusted rate for all causes of death in 2004 is 783.6 which is down from the age adjusted rate in 2003 of 819.2.

Table 44
South Dakota Resident Age-Adjusted Death Rates for 15
Leading Causes and Selected Components, 2004

Cause of Death	Age-Adjusted Rate
All Causes	783.6
Heart Disease	197.3
Acute Myocardial Infarction	71.6
All Other Forms of Chronic Ischemic Heart Disease	67.9
Heart Failure	15.2
Atherosclerotic Cardiovascular Disease	9.6
Hypertensive Heart Disease	3.7
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	1.9
All Other Forms of Heart Disease	27.3
Malignant Neoplasms (cancer)	186.4
Trachea, Bronchus, and Lung	51.7
Colon, Rectum, and Anus	17.4
Female Breast	23.4
Pancreas	12.2
Prostate	29.7
Leukemia	8.2
Non-Hodgkin's Lymphoma	7.9
Meninges, Brain, and Other Parts of Central Nervous System	6.3
Multiple Myeloma and Immunoproliferative	5.2
Kidney and Renal Pelvis	5.3
Esophagus	4.9
Liver and Intrahepatic Bile Ducts	4.2
Bladder	4.1
Ovary	7.5
Corpus Uteri and Uterus Part Unspecified	4.2
Stomach	2.0
Melanoma of Skin	1.9
Lip, Oral Cavity, and Pharynx	1.4
Cervix Uteri	1.9
Larynx	0.7
Hodgkin's Disease	0.5
Ill-Defined, Secondary, and Unspecified Sites	10.5
All Other Cancers	10.3

Note: Age-adjusted rates are computed with the 2000 standard.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 44 (Cont.)
South Dakota Resident Age-Adjusted Death Rates for 15
Leading Causes and Selected Components, 2004

Cause of Death	Age-Adjusted Rate
Cerebrovascular Diseases	50.1
Accidents	51.3
Motor Vehicle Accidents	24.4
All Other Accidents	26.9
Chronic Lower Respiratory Diseases	44.6
Alzheimer's Disease	26.2
Diabetes Mellitus	26.2
Influenza and Pneumonia	19.2
Intentional Self-Harm (suicide)	15.3
Chronic Liver Disease and Cirrhosis	12.8
Nephritis, Nephritic Syndrome, and Nephrosis	10.4
Organic, Including Symptomatic, Mental Disorders	9.3
Parkinson's Disease	7.0
Aortic Aneurysm and Dissection	6.5
Essential (primary) hypertension and hypertensive renal disease	5.9

Note: Age-adjusted rates are computed with the 2000 standard.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 45, on the next page, lists South Dakota resident leading causes of death for the last five years. Heart disease, cancer, and cerebrovascular diseases have been the first, second, and third cause of death for the past five years. Chronic lower respiratory diseases and accidents have been fourth and fifth for the past five years. Influenza and pneumonia was ranked sixth every year except in 2001 when it was seventh and in 2004 when it was ranked eighth. Diabetes mellitus was ranked seventh every year except in 2000 when it was eighth and in 2001 it was sixth. Alzheimer's disease was ranked eighth every year except in 2000 when it was seventh and in 2004 it when it was ranked sixth. In 2004, organic including symptomatic, medical disorders was not included in

the leading causes of death. In the past it had ranked ninth except in 2000 when it was tenth. Likewise, nephritis, nephrotic syndrome, and nephrosis was not in the leading causes of death in 2004 and 2001. However, for the last two years nephritis, nephrotic syndrome, and nephrosis had ranked tenth while in 2000 it ranked ninth. The ninth leading cause of death in 2004 was intentional self-harm (suicide). The only other year when intentional self-harm (suicide) made the leading causes of death was in 2001. The tenth leading cause of death in 2004 was chronic liver disease and cirrhosis. This was the first time in the last five years that chronic liver disease and cirrhosis was included in the leading causes of death for South Dakota residents.

Table 45
South Dakota Resident Leading Causes of
Death, 2000-2004

Cause of Death	Total			2004			2003			2002			2001			2000		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		34,735	100.0		6,811	100.0		7,109	100.0		6,886	100.0		6,915	100.0		7,014	100.0
Heart Disease(I00-I09, I11, I13, I20-I51)	1	9,739	28.0	1	1,775	26.1	1	1,942	27.3	1	1,933	28.1	1	1,984	28.7	1	2,105	30.0
Malignant Neoplasms (cancer).....(C00-C97)	2	7,967	22.9	2	1,559	22.9	2	1,645	23.1	2	1,561	22.7	2	1,598	23.1	2	1,604	22.9
Cerebrovascular Diseases(I60-I69)	3	2,508	7.2	3	463	6.8	3	475	6.7	3	518	7.5	3	491	7.1	3	561	8.0
Chronic Lower Respiratory Diseases.....(J40-J47)	4	1,901	5.5	5	393	5.8	5	379	5.3	4	382	5.5	5	360	5.2	4	387	5.5
Accidents(V01-X59, Y85-Y86)	5	1,841	5.3	4	407	6.0	4	390	5.9	5	344	5.0	4	382	5.5	5	318	4.5
Influenza and Pneumonia(J10-J18)	6	1,036	3.0	8	180	2.6	6	223	3.1	6	239	3.5	7	186	2.7	6	208	3.0
Diabetes Mellitus(E10-E14)	7	1,010	2.9	7	227	3.3	7	201	2.8	7	193	2.8	6	210	3.0	8	179	2.6
Alzheimer's Disease(G30)	8	938	2.7	6	255	3.7	8	175	2.5	8	169	2.5	8	159	2.3	7	180	2.6
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	9	654	1.9	*	*	*	9	159	2.2	9	144	2.1	9	135	2.0	10	125	1.8
Nephritis, Nephrotic Syndrome, and Nephrosis(N00-N07, N17-N19, N25-N27)	10	584	1.7	*	*	*	10	131	1.8	10	128	1.9	*	*	*	9	130	1.9
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	*	*	*	9	114	1.7	*	*	*	*	*	*	10	108	1.6	*	*	*
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	*	*	*	10	97	1.4	*	*	*	*	*	*	*	*	*	*	*	*
All Other Causes		6,557	18.9		1,341	19.7		1,389	19.5		1,275	18.5		1,302	18.8		1,217	17.4

Note: Letter/number combinations following cause of death are ICD-10 codes.

Due to rounding disease-specific death rates may not sum to state death rate.

*This cause was not one of the ten leading causes of death for that year.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Accidental Deaths

Table 46, below, displays the breakdown of accidental deaths for the last five years. In 2004, there were 407 accidental deaths. There are two main types of accidental death, motor vehicle or other causes of accidental death.

The highest motor vehicle death in 2004 was car occupant with 111 deaths. The highest death in the other causes of accidental death in 2004 was falls with 114 deaths.

Table 46
South Dakota Resident Leading Causes of Death Due to Accidents, 2000-2004

	Total	Year of Death				
		2004	2003	2002	2001	2000
Total Deaths	1,841	407	390	344	382	318
Motor Vehicle Accidents.....	949	185	215	185	187	177
Car Occupant.....(V40-V49)	531	111	112	106	95	107
Occupant of Pick-Up Truck or Van.....(V50-V59)	172	33	44	37	36	22
Pedestrian.....(V01-V09)	76	13	14	11	17	21
Motorcycle Rider.....(V20-V29)	61	12	14	12	13	10
Occupant of Special All-Terrain Vehicle.....(V86)	43	6	11	9	11	6
All Other Motor Vehicle Accidents	66	10	20	10	15	11
Other Causes of Accidental Death.....	892	222	175	159	195	141
Falls.....(W00-W19)	421	114	84	74	99	50
Accidental Poisoning(X40-X49)	80	31	13	17	9	10
Accidental Threats to Breathing (excl. drowning).....(W75-W84)	72	13	14	10	18	17
Exposure to Smoke, Fire, and Flames.....(X00-X09)	53	14	10	11	11	7
Accidental Drowning and Submersion...(W65-W74, V90, V92)	50	8	11	7	9	15
Air Transport Accidents(V95.0-V95.3, V95.8-V95.9, & V96-V97)	26	3	*	10	4	7
Accidental Discharge of Firearms.....(W32-W34)	21	4	7	5	*	3
Exposure to Excessive Natural Cold.....(X31)	21	5	4	4	*	6
Contact with Agricultural Machinery.....(W30)	13	*	3	4	*	3
All Other Causes of Accidents	135	29	27	17	39	23

Note: *Cells with less than 3 events.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

